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AUTHOR Susman, Elizabeth J.
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ABSTRACT

The study assessed the effect of two stylistic features of a prosocial television program, visual focusing and verbal labeling, on learning and behavior. Forty male and 40 female preschool children viewed one of five versions of a children's quiz show. Camera zooms and verbal labels alone and in combination emphasized sharing in four prosocial versions of the program: (1) visual focusing (camera zooms) alone, (2) verbal labeling alone, (3) verbal labeling and camera zooms and (4) no camera zooms, no verbal labeling. Sharing was edited out of a fifth version (control). Sex differences were found. Results indicate that: symbolic codes of the media can be used as mediators of television content, and symbolic codes influence behavior more than learning measured by words and pictorial symbols. Results are discussed in terms of the developmental lag between motoric performance and the ability to manipulate abstract symbols representing an act. (Author/MS)

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The Relation of Visual and Verbal Style of Television Presertation to Learning of Prosocial Content

Elizabeth J. Susman

Laboratory of Developmental Psychology

National Institute of Mental Health

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The Relation of Visual and Verbal Style of Television Presentation to Learning of Prosocial Content

Elizabeth J. Susman
National Institute of Mental Health

A variety of field and laboratory studies have demonstrated that the content of television affects behavior. In the sixties, Marshall McLuhan (1966) proposed that noncontent features of the visual media also affect us cognitively through their symbolic mode or format of representation. The symbolic mode of television consists of a unique combination of visual and auditory elements. For instance: (1) the camera pans a flood area to show the extent of destruction while the reporter verbally dramatizes the event, or (2) recently, the camera zoomed in on the captors retreat while the reporter elaborated on the deplorable condition of the hostages. That is, both visual and auditory features are essential for television literacy. The manner in which visual and auditory elements are combined to present a message is referred to as the style of presentation. Little is known about how stylistic features of television affect the viewer.

The purpose of this study was to determine the effect of two stylistic features of television, camera zooms and verbal labels, on learning or acquisition, and behavior (Bandura, 1971) of a program theme. These features were chosen because of their similarity to the two symbolic means whereby we represent reality, through imagery and verbal symbols. The effect of stylistic features on both learning and behavior was assessed for two reasons: (1) verbal labeling training of television content had different effects on learning and behavior in a earlier study (Friedrich & Stein, 1975) and (2) learning is usually assessed on "paper and pencil" tests but our concern is frequently on the effects of television on behavior in naturalistic settings.

It was predicted that verbal labeling would enhance learning. Camera zooms were predicted to enhance behavior of the prosocial content.

Method

Forty male and forty female preschool children viewed a videotaped children's quiz show. The quiz show was designed to emphasize camera zooms and verbal labeling yet resemble as closely as possible commercial television. Two girls and two boys, four to seven-year-olds, were the actor-contestants and an adolescent male was the master-of-ceremonies. The actors were introduced with the typical quiz show fanfare. Each contestant was then asked a question and won four prizes. There were five versions of the quiz show. These five versions formed the experimental treatments. In the prosocial versions the actors shared the prizes thay had won. That is, a contestant won four prizes and gave one to each of the other contestants. Camera zooms and verbal labels were varied orthogonally to highlight sharing among the actors. The four prosocial versions were: (1) Camera zooms alone-the camera zoomed in on the recipients receiving a prize from the sharing benefactor while the master-of-ceremonies made irrelevant comments about the show, (2) Verbal labeling alone - the master-of-ceremonies enthusiastically commented that the benefactor was sharing while the camera maintained a normal focus, (3) Camera zooms and verbal labels were both present, and (4) Neither camera zooms nor verbal labels were present. That is, the content of the program was constant while the stylistic features were varied. Sharing was edited out on a fifth version. Each child viewed one of the programs.

The dependent measures were: (1) a twenty-four item content test to assess learning, and (2) two behavioral measures of sharing. The content

test was designed to assess learning of specific content of the program and generalization of the sharing theme to other situations. The test was constructed on two response modalities: a visual mode in which items were presented in picture form and a verbal mode in which items were presented without accompanying pictures. This was done so that the relation between mode of presentation and mode of testing could be assessed. The behavioral measures consisted of a role-playing task to assess sharing in a situation similar to the one portrayed on the program. The subjects were asked questions and won prizes just like on television. Generalization of the sharing theme to a new situation was assessed on a clown game. Subjects "found" Froot Loops in a clown's pocket. The dependent variable was number of toys and Froot Loops shared with a peer.

Results

Learning, measured by the content test, was only slightly affected by viewing sharing on television. Children in the prosocial conditions showed slightly more, F (1,75) = 3.80, $p < .07$, learning of the program-specific content than those in the control condition. These findings are based on comparing all four prosocial conditions to the control condition (Winer, 1972). To test the specific hypotheses the four prosocial condition were submitted to an analysis of covariance in a 2 (camera zoom) x 2 (verbal labeling) x 2 (sex) x 2 (mode of testing) with age as a covariate. Camera zooms, verbal labeling, and sex were the between subjects factors. Mode of testing was a within subjects factor. There was a borderline significant interaction, F (1,55) = 3.23, $p < .08$, of camera zooms by sex by mode of testing. Girls in the camera zoom and verbal labeling combined condition did the best on the content test regardless of the mode of testing. Boys in the camera zooms conditions did the best on the verbal test while boys in the no zoom conditons had the highest scores on the visual test. On the content

test, then exposure to the prosocial programs led to slightly better performance than exposure to the control condition. Furthermore, camera zooms and verbal labeling seemed to have an additive effect for girls but not for boys.

The television programs had a greater impact on behavior than on learning. Children in the prosocial condition shared significantly more than those in the control condition on both the role-playing, F (i,75) = 8.85, p < .01. and clown game, F (1,75) = 5.86, p <.05. When the prosocial conditions were compared in a 2 (camera zoom) x 2(verbal labeling) x 2(sex) analysis of variance on the role-playing game there was a borderline significant effect of conditions, F (1,55) = 2.95, p <.08. Children in the camera zoom and verbal labeling combined condition shared significantly more than those in the camera zoom alone condition. Means appear in table 1. On a 5 (treatment)

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Insert table 1 about here

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by 2 (sex) analysis of variance there was an overall significant effect for conditions, F (4,70) = 3.77, p <.05.

On the clown game camera zooms alone lead to the most sharing although these differences were not significant. On a 5 (treatment) x 2 (sex) analysis of variance there was a borderline significant effect for conditions, F (4,70) = 2.27, p <.07.

Learning on the content test was not correlate' with sharing on the behavioral measures. However, the program-general and program-specific scores on the content test and the clown and role-playing measures were positively and significantly related to each other. Regression analysis was used to determine what factors, in addition to television viewing group, were predictive of learning and behavior. Television viewing group,

age, attention to the program, and teacher rating of children's general prosocial behavior were used as predictor variables. Age was the best predictor of learning on the visual, F (1,74) = 13.57, $p < .01$, and verbal F (1,74) = 11.48, $p < .01$, content test scores. Television treatment was the best predictor of sharing on the clown, F (1,74) = 5.25, $p < .01$, and role-playing measure, F (1,74) = 13.85, $p < .01$. In summary, learning of the content was not associated with sharing on the behavioral measures. Very different factors predicted learning and behavior.

Discussion

In summary, camera zooms and verbal labels slightly influenced children's learning of the program theme. However, behavior was affected by stylistic features, primarily verbal labels.

Although the effects of television viewing were slight for the content test there is evidence that the test was measuring learning. Attention to the program was correlated with learning program-specific but not program-general scores on the content test. Furthermore, differences between experimental and control groups were more pronounced for the program-specific than the program-general content. In general, children appeared to experience difficulty engaging in a logical search process to decipher the correct alternatives on the content test.

Stylistic features had a more direct effect on behavior. When neither camera zooms nor verbal labels were present (no camera zooms-no verbal labeling) sharing was not significantly different from levels in the control condition. The process of "zooming in" and verbally labeling the relevant features of the television program seemed to assist the child in indentifying important elements in the complex array of auditory and visual stimuli.

Other research using a variety of stimulus media has demonstrated that young children do not distinguish, on their own, central from incidental thematic content (Hagen & Hale, 1973; Leifer, Collins, Gross, Taylor, Andrew, & Blackmere, 1971). Verbal labels seemed to act as covert mediators of later behavior. Camera zooms may have stimulated imagery formation which later served to mediate sharing.

The different effects of stylistic features on learning and behavior can be understood in a developmental framework. An assumption of imitation theory is that different factors affect learning and behavior (Bandura, 1971). This assumption was extended to explain the effects of television: The more learning of content, the more such learning should be exhibited in behavior (Stein & Friedrich 1975). This assumption implies that learning precedes behavior. The reverse, that behavior precedes learning, seems equally tenable. The absolute value of the test scores for the various measures cannot be compared. However, children appeared to experience increasing difficulty in translating the theme of the program into the measurement formats as the measures decreased in similarity to the television program. The program-general items required that children translate the theme into abstract verbal and pictorial symbols and then generalize the theme to a new situation. On the other hand, the role-playing measure required only that children abstract the theme to a concrete situation. As the tests decreased in similarity to the television stimulus, that is, as more symbols were used, there was less evidence of the effects of television.

The learning measures appeared to require a more abstract form of knowledge than the behavioral measures. These types of knowledge have a different developmental course. Age was correlated with learning but was

not correlated with behavior. Piaget (1976) suggested that actions or behavior are the raw material of all later knowledge. Gilbert Ryle (1949), the philosopher, otherwise phrased this notion as "knowing how" comes earlier in the acquisition of knowledge than "knowing that". It appears that motoric performance and conceptual learning are different types of knowledge, one preceding the other developmentally, rather than two separate phenomenon. These findings indicate the need for sensitive measures to assess the effects of television in this age group.

In conclusion, learning of media content in this study was influenced by the style in which it was presented. Effects are subtle and exhibited differentially on different measurement systems. Although the visual features enhanced learning and behavior to a small degree, auditory elements more dramatically affected behavior. Children, like ourselves, appear to listen to television. The auditory features probably are responsible for (1) attracting the child's attention and (2) encapsulating the message into a readily retrievable form. Television is considered a visual media, but television literacy is dependent to a great degree upon auditory symbolic codes which embellish and amplify the visual image.

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TABLE 1

MEAN NUMBER OF ITEMS SHARED ON CLOWN AND

ROLE-PLAYING MEASURES

Condition	Verbal Labeling	No Verbal Labeling	Control
	Clown		
Zooms	3.3	3.8^{b}	1.9^{ab}
No Zooms	3.4^{a}	2.6	
	Role-Playing		
Zooms	1.8^{ab}	$.8^{a}$	$.06^{bc}$
No Zooms	1.3^{c}	.9	

NOTE: Means with the same superscripts are significantly different from each other on t tests.